TRAFFIC(U.S.A.)

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IS THE INTERNATIONAL TRADE CONVENTION FOR OR AGAINST WILDLIFE ?

by

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presented at the

WORLD CONFERENCE III
ON BREEDING ENDANGERED SPECIES IN CAPTIVITY

November 12-15, 1979

San Diego, California

WORLD WILDLIFE FUND-U.S.

TRAFFIC (U.S.A.)—Trade Records Analysis of Flora and Fauna in Commerce—is a scientific information-gathering program monitoring trade in wildlife, plants, and their products. It is funded by World Wildlife Fund-U.S.

IS THE INTERNATIONAL TRADE CONVENTION FOR OR AGAINST WILDLIFE ?

Nicole Duplaix and Laura Grady

CITES- the Convention on International Trade in Endangered Species of Wild Fauna and Flora- was signed in Washington, D.C., on 2 March 1973 and came into force on 1 July 1975 when ten nations had ratified it. Today, 53 nations are party to this international agreement and two more, the People's Republic of China and Italy, will become members before the end of the year.

CITES prohibits the international commercial trade in the rarest 600 odd species of animals and plants listed on its Appendix I and requires licenses from the exporting country for another 200 species listed on Appendix II.

The questions we must address are complex, contradictory, and disillusioning. Is the objective of CITES eventually to eradicate international trade in wildlife and its products? Or will its role be to effectively regulate it so that even the rarest species can still be removed from the wild? Are all the party nations aware of every intricate regulation of the Convention they ratified and can they even begin to enforce it? How does this global Convention affect zoos- will it put an end to the purchase of rare animals and, more importantly, could it curtail the growing and vital exchange of captive-bred animals between zoos? One thing is certain- CITES not only multiplies the red tape and paperwork, which could discourage many zoos from attempting to overcome this challenge, but also it will, and must affect the whole concept of breeding

endangered species- the whys, the hows, and the what nows.

Our once fairly optimistic outlook suffered a considerable setback after studying the background data for this paper. To start with, we listed all the mammals, birds, and reptiles that had bred in captivity over the last three years, dividing them into CITES Appendices and non-CITES categories; long, impressive and misleading tables resulted. If one zoo breeds a solitary tinamou (listed on Appendix I) and its chick does not survive, you achieve an absolute 100% mortality of the offspring during the first year, if it does, this becomes a 100% survival rate. The data were just too few and each species required an explanation. Furthermore, it would seem wiser to be more concerned about existing trends in zoo breeding rather than absolute numbers. After that abortive effort, we carefully reread the proceedings of the Jersey Conference where we really spent a great deal of time patting each other on the back and became quite ruffled when John Perry and Moira Warland dared to challenge and question our firm convictions that we were doing a splendid job. But they made us think, and zoos have been doing a great deal of thinking and research since then, which, in many cases, have proved their worries to be well founded. In London, Janet Kear set the tone of the second conference by stating: "Why should we assume that captive breeding provides protection and from what does it protect?" Today we are aware of the planning required for captive long-term propagation and the necessity for careful monitoring of the individual animal's behavior, genetic history, husbandry, and pathology. Records,

once haphazard and seldom shared, are pooled and open to scrutiny by computers and studbook keepers. Yes, we have come a long way since Jersey, only seven years ago, but have the changes in our thinking come too late?

A most discouraging fact is that wildlife is traded as a product far more than it is traded alive- furs, leather, ivory, tortoiseshell constitute the bulk of the market, a luxury, non-essential market at that. In 1978 the United States imported $23 million worth of reptile hides and skins, $69 million of feathers and down, $140 million of furskins, nearly $8 million in ivory. These Customs import values are based on the importers declared buying price, i,e. a fraction of the ultimate retail price. For example, 15,620 lynx furskins valued at $4.5 million were imported in 1978 at an average $290 per skin. It takes ten furs to make a lynx coat which retails for $10,000. The value of all wildlife and its products imported into the United States in 1978 and for the first eight months of 1979 was $300 million and $230 million respectively. That represents 200,000 documented shipments in 1978 of which at least 10,000 contained endangered or threatened wildlife (Appendix I or II species). Official Department of Commerce figures show the U.S. importing 3 million live mammals and reptiles and 600,000 live birds in 1978. The exact number of zoo and aquarium specimens is not available, but, based on a total value of under $400,000, zoo involvement is negligible (1.2%) compared to the $29 million worth of live mammals, reptiles, birds, tropical fish and shellfish destined for the pet trade and research institutions.

Can the Convention curb these imports? Will placing one exploited species on an Appendix merely turn the trade's attention to a non-endangered species until, it too is placed on an Appendix? The bobcat and lynx were immediate targets when the spotted cats were protected. The monitor and tegu lizards suffered the brunt of crocodilian protection. We can also well ask- is the Convention enforced properly or is it circumvented? For most countries with only a year or two into CITES, it is probably too early to know whether CITES is or can ever be effective, paricularly where the larger Third World source nations are involved. There exists a widespread and growing concern in developing nations to control the exploitation of wildlife and to promote wise and rational programs for the use of their living resources, at least on paper, in practice...

This concern was eloquently addressed at the second CITES meeting in Costa Rica. The delegate from Brazil claimed that her country was unable to effectively monitor its vast borders and control exports: not enough funds or personnel were available. She requested assistance from other nations, particularly developed, consumer nations, by prohibiting the import of Brazilian specimens of wildlife that are being taken and exported illegally. These remarks are valid when you consider the staggering amounts of wildlife being imported by one consumer nation, the United States- and these animals are on a one-way trip.

Any wildlife law is only as good as its enforcement and

is enforcement the biggest stumbling block the Convention has to overcome? No, the biggest problem of CITES is that only 53 nations have ratified it, less than half the world's nations. Third World countries lack the resources and expertise to draft and implement the necessary legislation and many of these countries', like Thailand, Tanzania, and Colombia, are known for their intensive wildlife trade. In other consumer nations, strong lobbying groups oppose wildlife controls. Japan, the largest consumer of ivory, tortoiseshell, crocodilian leather, and whale products, is the most obvious example. Detailed analysis of international trade routes based on CITES annual reports and national trade statistics all point an accusing finger at Japan's insatiable appetite for wildlife and wildlife products.

If CITES is effective, will smuggling increase? A writer from the National Geographic Society doing an aricle on wildlife trade told me recently that as a result of CITES much wildlife trade has been driven underground. Shipments of animals are being rerouted via non-CITES nations to avoid controls. For instance, in August 1978, a shipment of three tapirs, three clouded leopards, 38 gibbons and 50 stumptail macaques were shipped from Laos via Thailand to Belgium- all non-members of CITES. The animals probably originated in Thailand and were smuggled into neighboring Laos since Thailand protects tapirs and gibbons.

Smuggling is not only reserved for the pet trade. Zoos have also been involved in a form of smuggling which is even

more highly selective, highly sophisticated, but with a serious drawback. The coveted rarity aquired with so much cunning, money, and deceit usually stands out like a sore thumb in the Zoo Yearbook census and is open to the curiosity and criticisms of visiting zoo colleagues. An animal acquired in this manner is excluded from breeding for fear of detection. This type of smuggling will be reserved for our most naive or our most ruthless collectors rather than the professional zoo,and the number of species affected will be small. Unfortunately, you cannot make a house or CITES burglar proof against this sort of attack.

A problem encountered by all who try to enforce the CITES regulations is not being able to obtain information on current wildlife legislation from other countries. Such documents are vital for the effective implementation of CITES and even other international legislation, such as the Lacey Act of the U.S., currently being revised and strengthened. A compounding factor is that officials in foreign embassies usually cannot identify wildlife seized in a shipment nor provide interpretation, nor even lists of current foreign wildlife laws. Serious consideration should be given to establishing a network of qualified persons who could serve as accessible sources of accurate information on trade in wildlife and the laws pertaining to that trade and other utilization. Perhaps this would come within the scope of the IUCN Survival Service Commission's TRAFFIC group. TRAFFIC (Trade Records Analysis of Fauna and Flora in Commerce) was established in 1972 to

gather data and monitor the international trade in wild animals and plants. Currently there are two offices based in London and Washington. We need many more if we are to assist zoos and the CITES countries adequately and provide background information. The enthusiasm is there now, all we need is the money.

We have expressed concern for CITES growing pains but we should conclude this section by underlining that the Convention, our only international, multi-national piece of wildlife legislation, can and will control wildlife trade. Live wildlife trade, so much more conspicuous and difficult to smuggle than products, will be affected first until smuggling is controlled to an acceptable level and can be regarded as a regrettable overhead, a minor concern. We must do something to reduce the luxury markets for products in consumer nations- that wastage along with the demands of the pet trade has and will continue to affect zoos indirectly until CITES is as effective as it promises to be.

Certain aspects of CITES- basically a trade agreement about tradeable species- worry us when put in a zoo context. For instance, ISIS data analysis has shown that of the 108 reporting zoos, mostly in North America, the composition of the collection was heavily biased towards certain mammalian orders. Primates, carnivores, and artiodactyls account for 80% of all specimens exhibited, 85.5% of the births and 79.5% of the deaths. If we dig a bit deeper, the Felidae represent 48% of all carnivores exhibited. Now that is interesting because commercial trade is also heavy in primates and cats. There are

36 species of wild cats of which half have been exploited by the fur trade and the IZY lists 28 species as breeding in zoos in 1977. Most of the big cats and a number of the smaller ones are listed on Appendix I and the remainder on Appendix II. Among the Appendix I species are the cheetah, the clouded leopard, the snow leopard and the tigers. There are 183 mammals on Appendix I of which about 85 can be seen in zoos; there are 66 on Appendix II of which 35 are represented in collections. Breeding is another matter. We have charted the progress of certain species to try and find out where we stand now. This was done by updating the "Threatened Mammal Species Breeding Results 1964-1976" compiled by the National Zoo in Washington. In view of our recent concern with inbreeding coefficients I wondered how many of the eight species, listed as self-sustaining by Perry et al. in 1972 were in fact- safe; they were the Siberian tiger and seven ungulates.

1. The Siberian Tiger (Table 1. Figure 1)

   In North America, the majority of Siberians (91%) are descended from nine animals. The worldwide captive population of 756 in 196 zoos must also be inbred when 97% are captive bred. But the graph does look promising, at least on the surface.

2. Clouded Leopard (Table 2, Figure 2)

   The average number of 2.4 per zoo and a total of 136 animals in 57 zoos remains too low, too scattered. The breeding curve has risen consistently, crossing over the wild import one,which is encouraging. The number

of animals is still very low.

3. Snow Leopard (Table 3, Figure 3)

   Acqisitions from the wild have virtually stopped. The breeding curve has risen steadily even though infant mortality was high. The cross-over point between captive bred and wild imports was reached in 1976. The average of 3.5 animals in 46 zoos with a total population of 161 allows for guarded optimism.

4. Cheetah (Table 4, Figure 4)

   Even though the to l number of captive animals is declining slowly the breeding curve is rapidly growing. There are now 4.2 cheetahs on average in 138 zoos and a total of 586 in captivity. A broad-based gene pool with promise.

The primates are all listed on Appendix I and II. The great apes are still very much in demand by the non-zoo trade. In 1973, 270 chimpanzees were exported from Sierra Leone and eventually a ban was placed on chimp exports in 1978. But in December of that year, ten baby chimps were confiscated at Amsterdam airport on their arrival from Sierra Leone. In the last four years, the United States has not issued a single import permit for chimpanzees.

The breeding record of the great apes in captivity is not too discouraging when you consider the age of sexual maturity and the fact that a breeding female may have only four or five young in her lifetime. For animals with such low breeding potential, zoos have done well with at least chimpanzees and

orangutans.

5. Orangutans (Table 5, Figure 5)

   The birth rate has increased markedly over the past years. A total population of 722 divided between 162 zoos, still too many, with an average of 4.4 per collection. Future promising.

6. Gorilla (Table 6, Figure 6)

   Not so for the gorilla. The birth curve is increasing very slowly, well below what is required to compensate for normal losses and infant mortality. 78% wild caught versus 47% for orangutans. This species should cause us all great concern.

7. Golden Lion (Table 7, Figure 7)

   I did not want to end the analysis of primates in zoos on a negative note. Another species, with once an even more desperate situation of low numbers combined with restricted range and habitat loss, has made a comeback. It proves what careful scientific management, interzoo cooperation, mortality factor analysis and active studbookkeeping can do. Percentage captive bred 84%, total number 137 in only 14 collections or 9.8 per zoo, many of them in Washington and nearby Front Royal.

I would like to conclude this section with two ungulates: the onager and the Arabian oryx. Both species have made great progress in the last five years. In 1971 the onager population in zoos was decreasing sharply (Table 8, Figure 8)- 53% captive bred with 3 onagers on average in 44 zoos but today: 85% captive bred with 4.6 per collection in 34 zoos. The onager's future

seems brighter. The Arabian oryx (Table 9, Figure 9), like the Golden Lion tamarin, shows what can be done under conditions of excellent management when a few dedicated zoos pool their resources. With more than 20 oryxes in 6 collections for a total of 122- three times the population ten years ago. If the re-introductions in Jordan and the Far East succeed, this species will have recovered its numbers to a significant level.

Figure 10 illustrates the three phenomena we have discussed. 1. Captive populations with a high percentage of wild-caught individuals; 2. Other species with a small number of wild-caught animals and a large captive population; and 3. those making the transition. Tables and graphs unfortunately do not indicate inbreeding coefficients unless infant mortality is automatically interpreted as such. Nor do they show the zoos breeding too many from too few. Such an intense input from one well-intentioned zoo could prove to be disastrous to that rare species in the long run.

I hope and I believe that CITES will produce. indirectly, more gorillas and clouded leopards. The acquisition of animals from the wild is going to become much more difficult inevitably, and the impact of CITES on zoos will be minimal compared with the result of habitat loss which means fewer animals in the wild. CITES will also affect the prices of live specimens, making it all the more important not to lose the sales value of the offspring through careless husbandry or genetic ignorance. We need still better records, more careful studbook analysis, studbooks on more species- CITES has generated yet another

form of paperwork for zoos, but one vital to our success. Already records, thanks to the Yearbook questionnaire, ISIS and the studbooks, have improved noticeably since Jersey. CITES should serve as an ally and a warning to zoos- reducing the effect that the non-zoo trade and the demands of the luxury market in products has on wildlife. We may not be able to save more than a small percentage of endangered species through careful captive management, but we can at least stave off extinction for many species for many years to come- thanks to CITES.

Panthera t. altaica	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting	36	41	49	50	51	66	71	77	84	89	95	98	100	179	196
Total population	104	116	149	162	191	224	248	296	325	356	404	460	450	677	756
Captive bred	73	66	87	109	140	161	192	253	291	313	359	422	411	652	731
Percent captive bred	70	57	58	67	73	72	77	85	90	88	89	92	91	96	97
Births (surviving)	21	28	28	43	58	59	75	71	101	125	135	114	65	123	--
Individuals per collection	3	3	3	3	4	3	3	4	3.9	4	4.3	4.7	4.5	3.8	3.9

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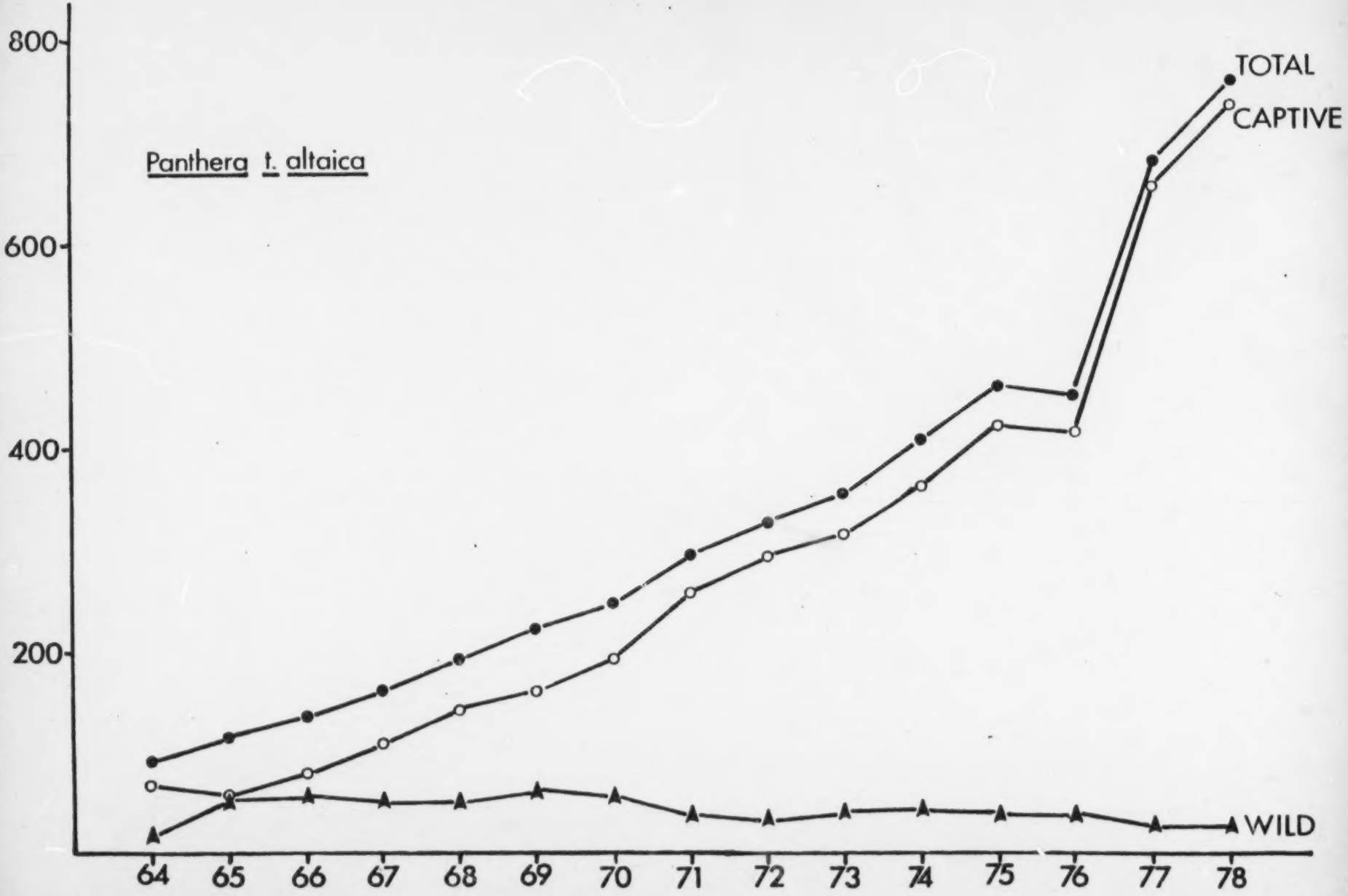
800
600
400
200
Panthera t. altaica
TOTAL
CAPTIVE
WILD
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78

Neofelis nebulosa	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting	22	33	33	41	44	ND	50	51	53	51	51	52	56	53	57
Total population	36	56	68	81	83	ND	111	107	113	112	125	113	135	141	136
Captive bred	3	3	4	14	15	ND	28	30	31	30	42	38	47	60	68
Percent captive bred	8	5	6	17	18	ND	25	28	27	27	33	34	35	43	50
Births (surviving)	2	1	8	7	6	13	7	2	3	12	10	13	12	10	--
Individuals per collection	1.6	1.7	2.1	2	1.9	ND	2.2	2.1	2.1	2.2	2.5	2.2	2.4	2.7	2.4

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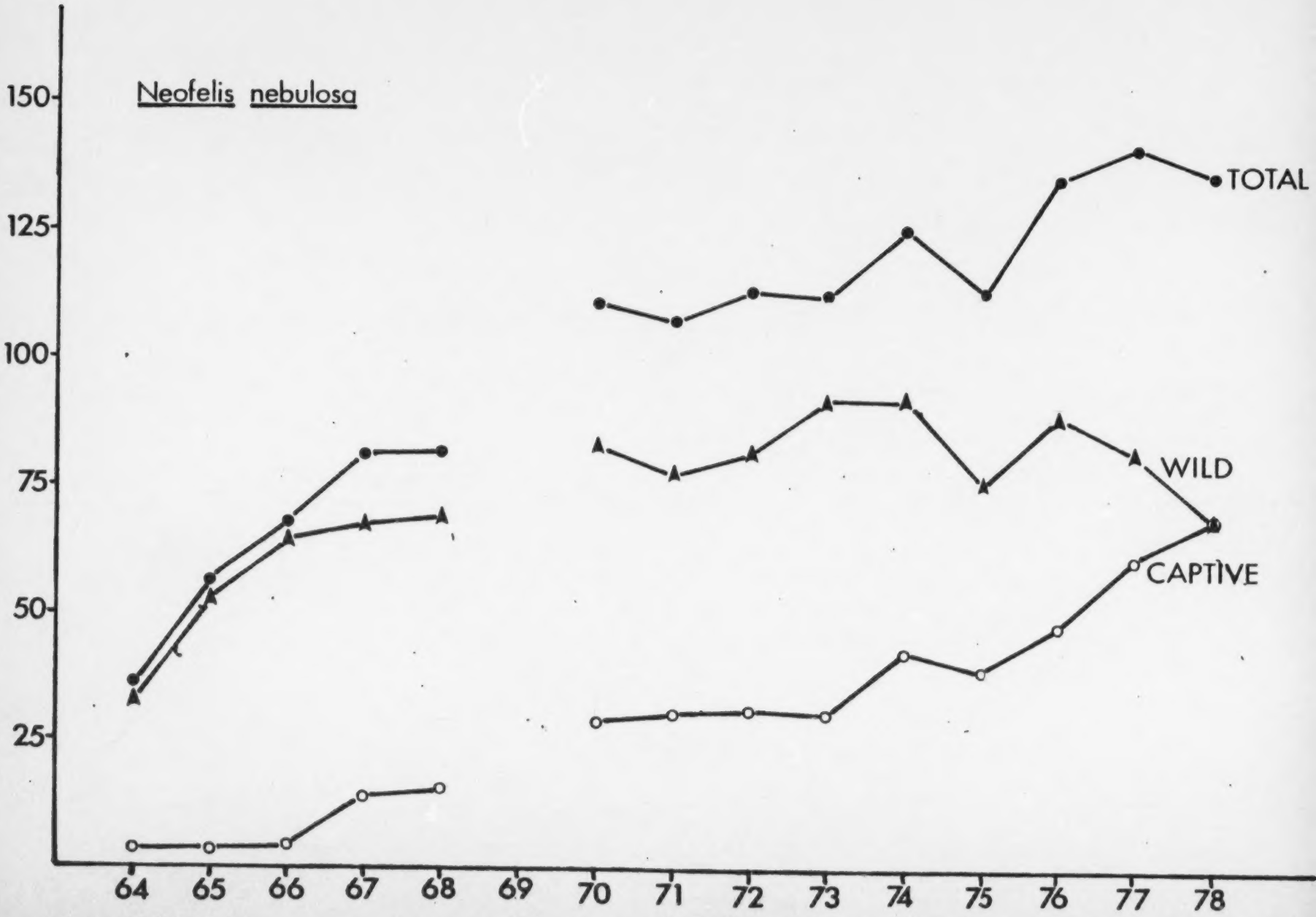
Neofelis nebulosa
150
125
100
75
50
25
TOTAL
WILD
CAPTIVE
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78

Fig. 2

Panthera uncia	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting	27	28	28	33	39	42	39	44	45	50	47	45	45	52	46
Total population	49	54	65	64	90	96	93	98	112	130	127	139	159	167	161
Captive bred	8	4	3	15	15	20	29	31	32	46	55	68	89	99	104
Percent captive bred	16	7	6	23	17	21	31	32	29	35	43	49	56	59	65
Births (surviving)	3	1	6	15	7	10	7	12	12	14	20	24	15	25	--
Individuals per collection	2	2	2	2	2	2	2	2	2.5	2.6	2.7	3.1	3.5	3.2	3.5

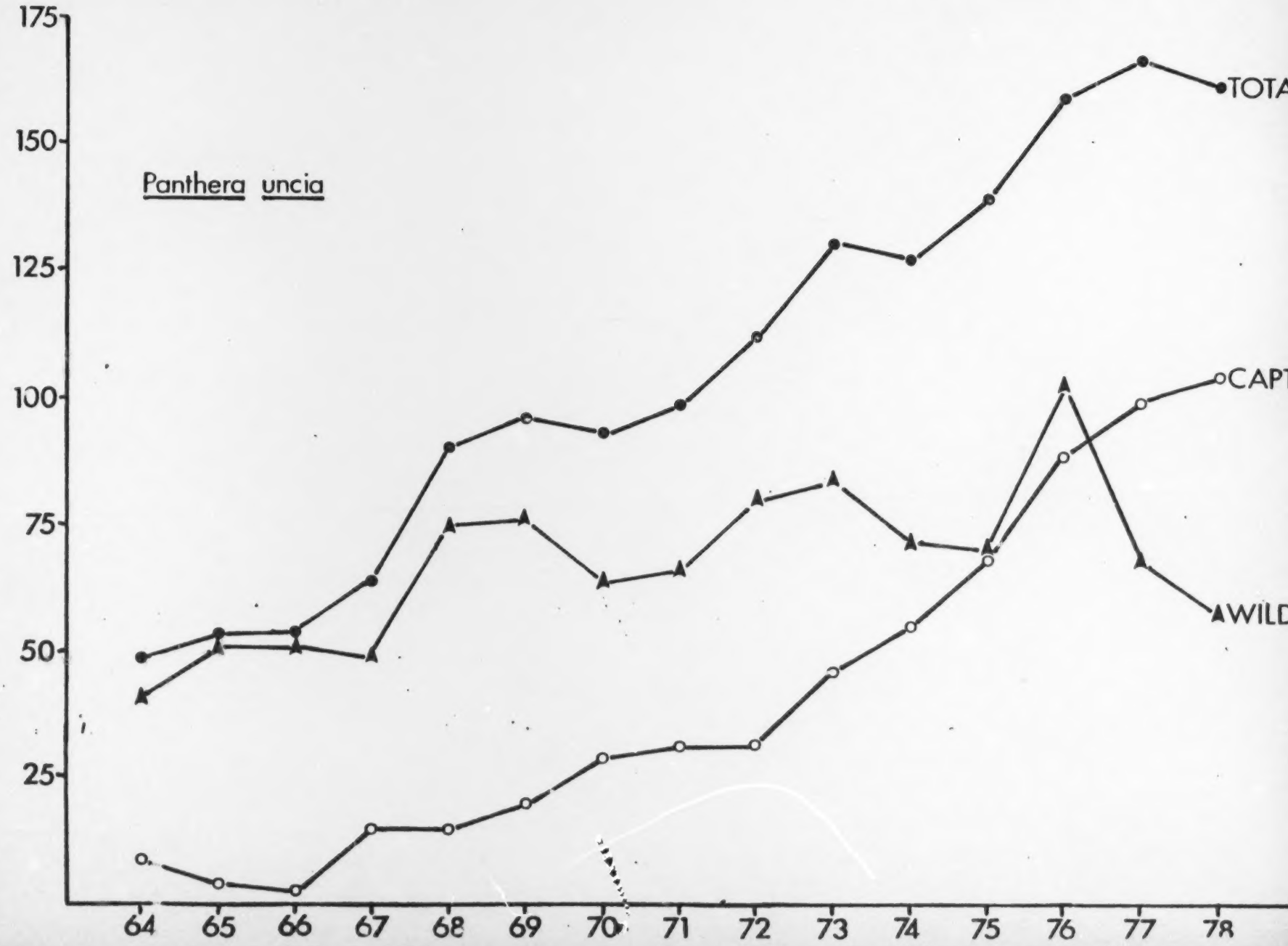
175
150
125
100
75
50
25
Panthera uncia
TOTA
CAPT
WILD
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78

Fig. 3

Acinonyx jubatus	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting									122	133	139	141	135	146	138
Total population									403	521	597	652	604	645	586
Captive bred									23	39	76	102	131	177+	185+
Percent captive bred									6	7	13	16	22	27	32
Births (surviving)									15	28	31	62	50	37	--
Individuals per collection									3.3	3.9	4.8	4.6	4.5	4.1	4.2

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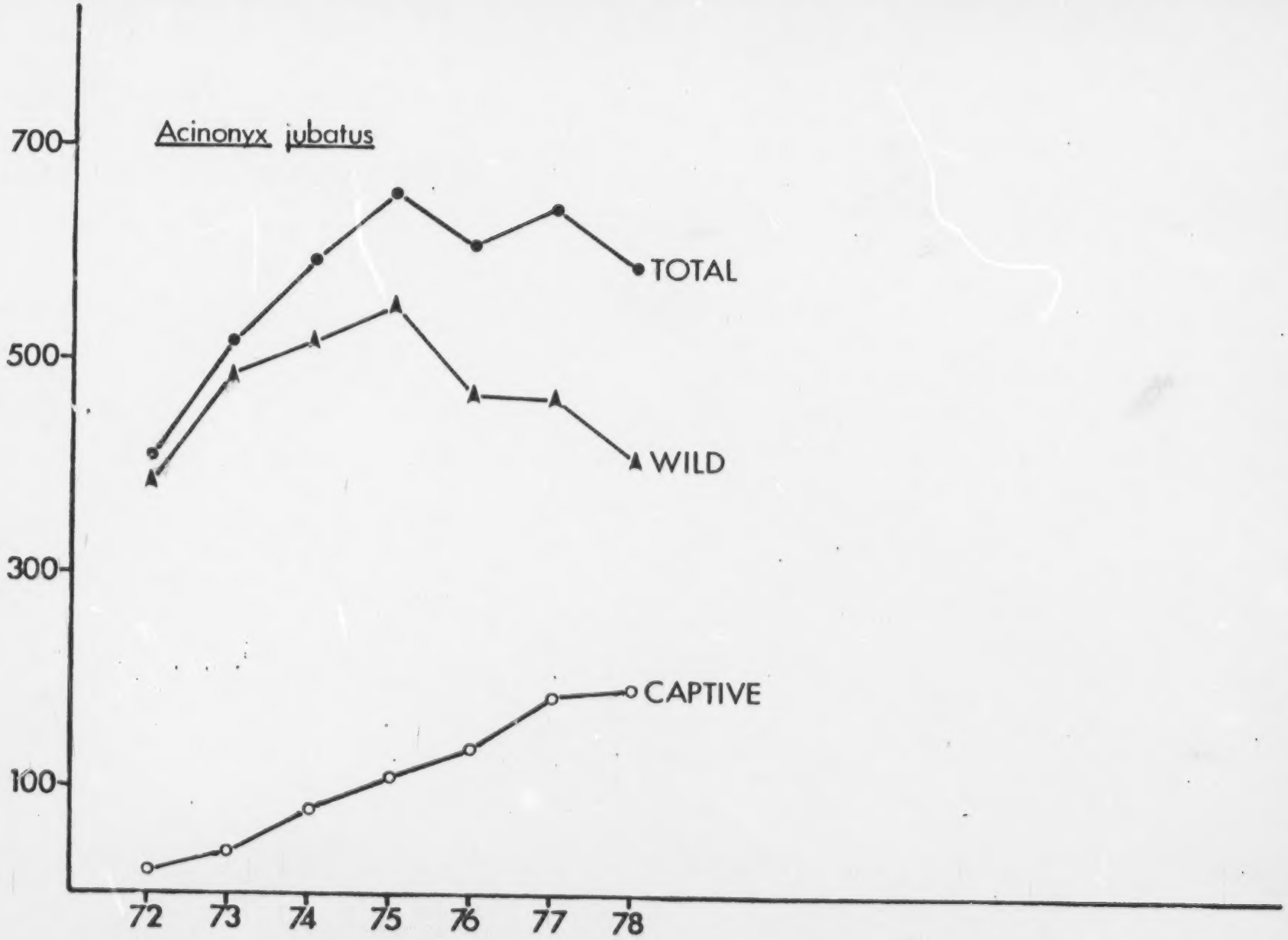
Acinonyx jubatus
700
500
300
100
TOTAL
WILD
CAPTIVE
72
73
74
75
76
77
78

Fig. 4.

Pongo pygmaeus	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting	96	107	120	141	120	119	117	128	125	127	131	153	128	163	162
Total population	278	349	389	438	434	455	469	539	556	578	625	620	648	678	722
Captive bred	37	44	46	55	68	81	112	152	165	194	226	241	279	320	341
Percent captive bred	13	13	12	13	16	18	24	28	30	34	36	39	43	47	53
Births (surviving)	6	9	21	19	28	28	30	38	31	42	29	32	36	53	--
Individuals per collection	3	3	3	3	4	4	4	5	4.4	4.6	4.8	4.1	5.1	4.2	4.4

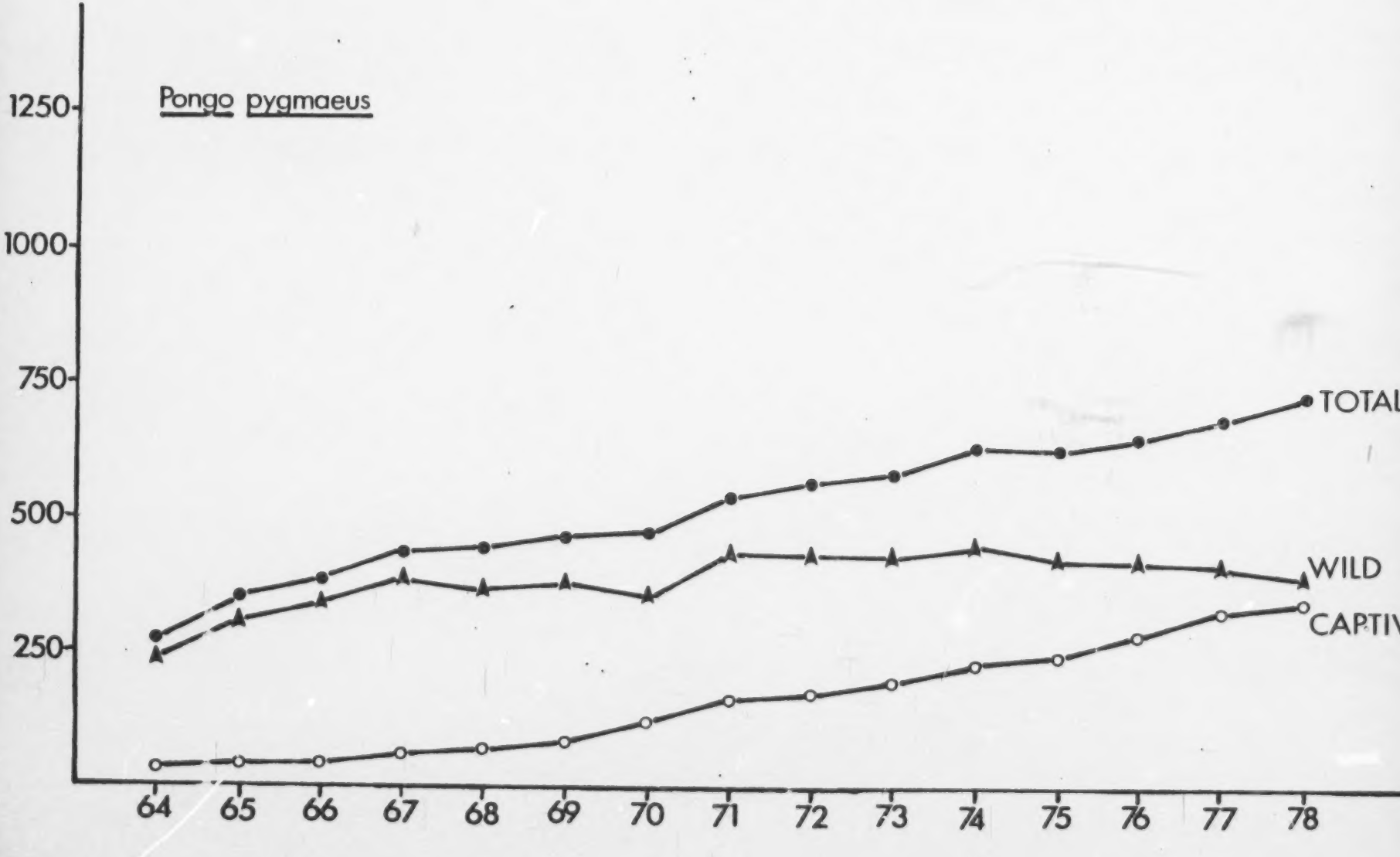
Pongo pygmaeus
1250
1000
750
500
250
TOTAL
WILD
CAPTIV
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78

Fig 5

Gorilla g. gorilla	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting	68	71	87	92	97	94	97	100	101	110	111	112	110	117	115
Total population	170	219	259	289	294	299	319	331	338	363	374	417	424	442	457
Captive bred	6	8	9	13	16	17	24	29	39	47	53	71	81	87	101
Percent captive bred	4	4	3	4	5	6	8	9	12	13	14	17	19	20	22
Births (surviving)	2	3	2	4	3	6	8	11	11	9	16	14	15	10	--
Individuals per collection	2.5	3.1	3	3.1	3	3.2	3.3	3.3	3.3	3.3	3.4	3.7	3.9	3.8	4

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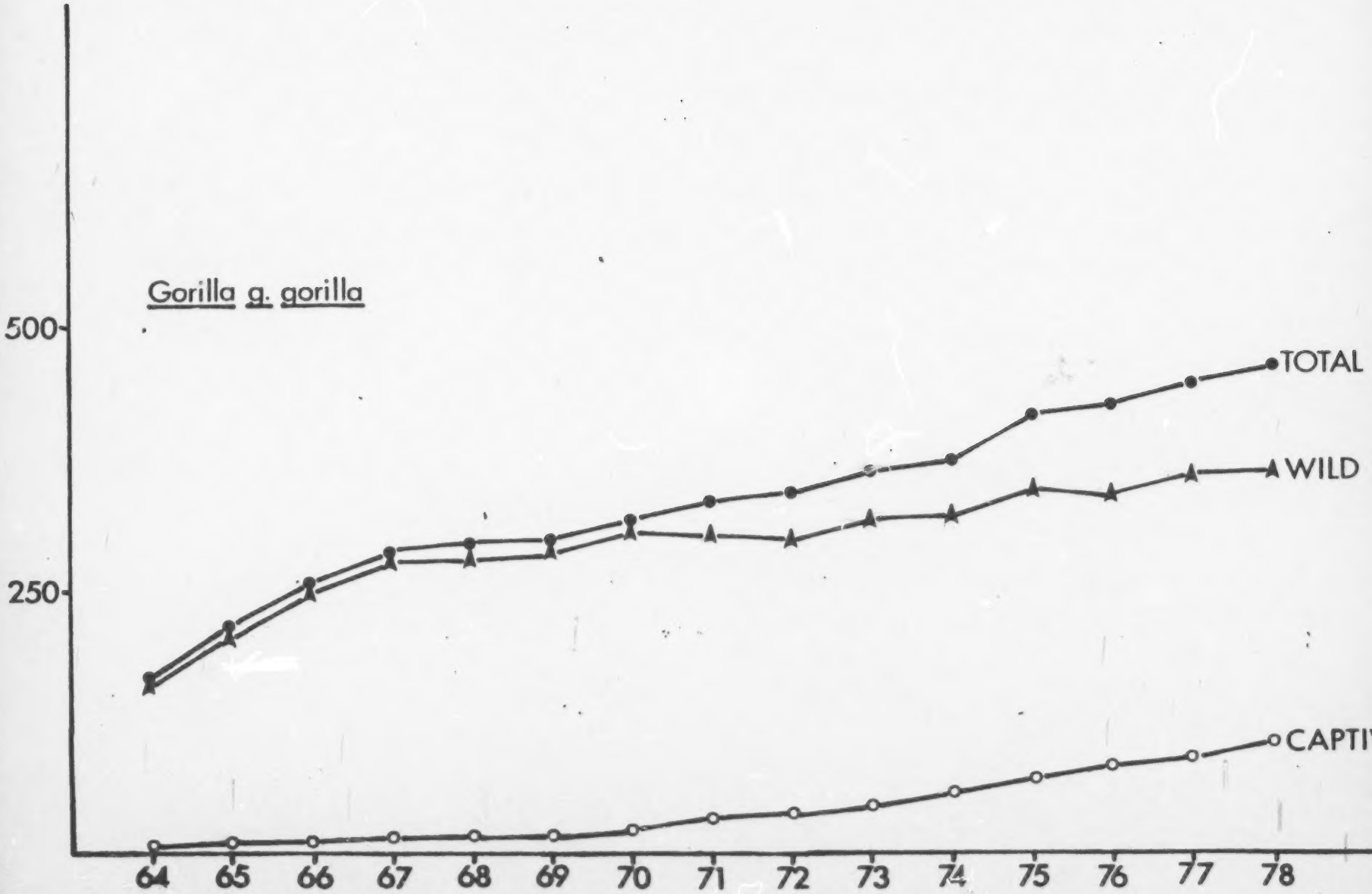
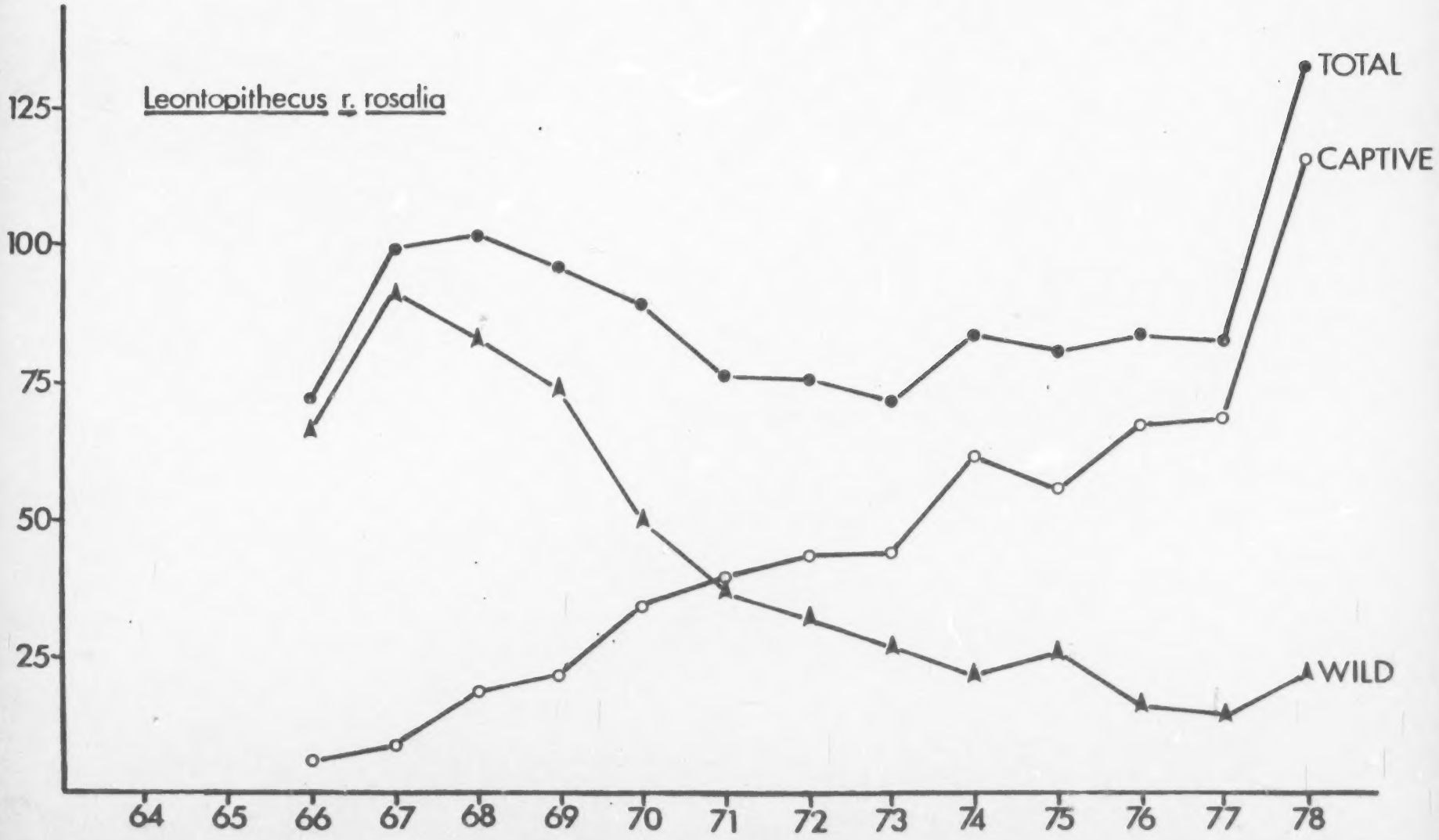

Gorilla g. gorilla
500
250
TOTAL
WILD
CAPTI
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78

Fig. 6.

Leontopithecus r. rosalia	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting	ND	ND	23	27	28	24	23	20	17	14	15	13	15	13	14
Total population	ND	ND	72	99	102	96	84	76	75	71	83	80	83	82	137
Captive bred	ND	ND	6	8	19	22	34	39	43	44	61	55+	67	68	115
Percent captive bred	ND	ND	8	8	19	23	40	51	57	62	73	67	81	83	84
Births (surviving)	5	7	5	10	10	18	11	21	10	13	14	12	23	32	--
Individuals per collection	ND	ND	3	4	4	4	4	4	4.4	5.1	5.5	6.2	5.5	6.3	9.8


Leontopithecus r. rosalia
125
100
75
50
25
TOTAL
CAPTIVE
WILD
64
65
66
67
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70
71
72
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75
76
77
78

Fig. 7

Equus h. onager	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting	26	33	38	39	32	37	43	44	34	32	35	32	31	33	34
Total population	89	113	135	150	118	132	145	139+	105	115	125	132	142	143	156
Captive bred	34	34	61	76	65	56	77	74	77	86	91	113	124	127	132
Percent captive bred	38	30	45	51	55	42	53	53	73	75	73	87	87	89	85
Births (surviving)	6	18	15	14	13	14	14+	6	17	15	12	18	17	11	--
Individuals per collection	3	3	4	4	4	4	3	3	3.1	3.9	3.6	4.1	4.9	4.3	4.6

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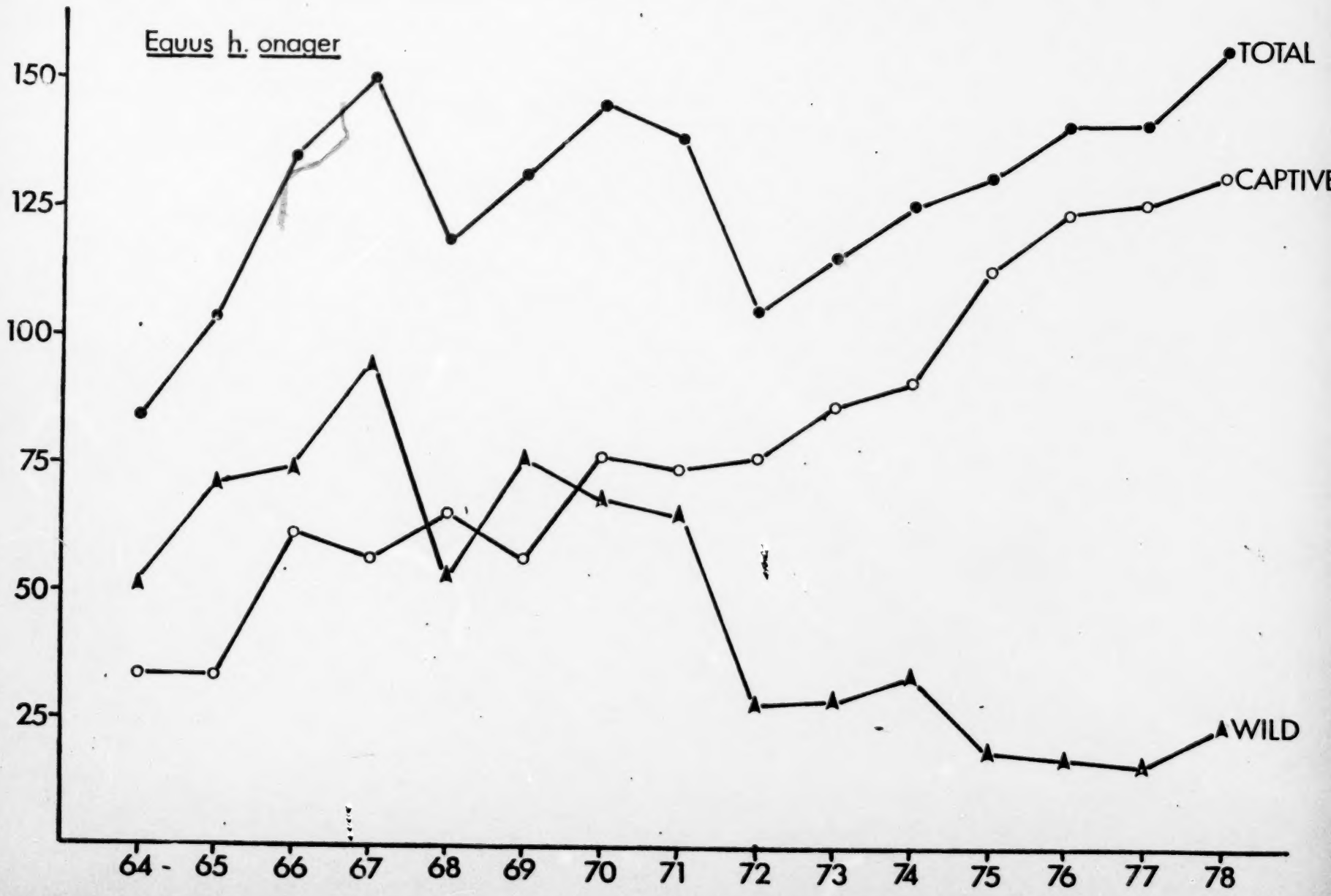
Equus h. onager
150
125
100
75
50
25
TOTAL
CAPTIVE
WILD
64 - 65 66 67 68 69 70 71 72 73 74 75 76 77 78

Fig. 8

Oryx leucoryx	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
No. zoos reporting	4	4	5	5	6	5	4	4	3	3	5	3	7	7	6
Total population	27	27	39	49	44	48	58	75	43	49	66	62	99	98	122
Captive bred	2	7	10	9	9	18	18	49	34	17+	56	59	90	90	114
Percent captive bred	7	26	26	18	20	38	31	65	79	35+	85	95	91	92	93
Births (surviving)	2	3	3	1	5	4	6	9	3	11	12	14	19	25	--
Individuals per collection	7	7	8	10	7	10	15	19	14.3	16.3	13.2	20.1	14.1	14	20.3

Table

BEST AVAILABLE COPY

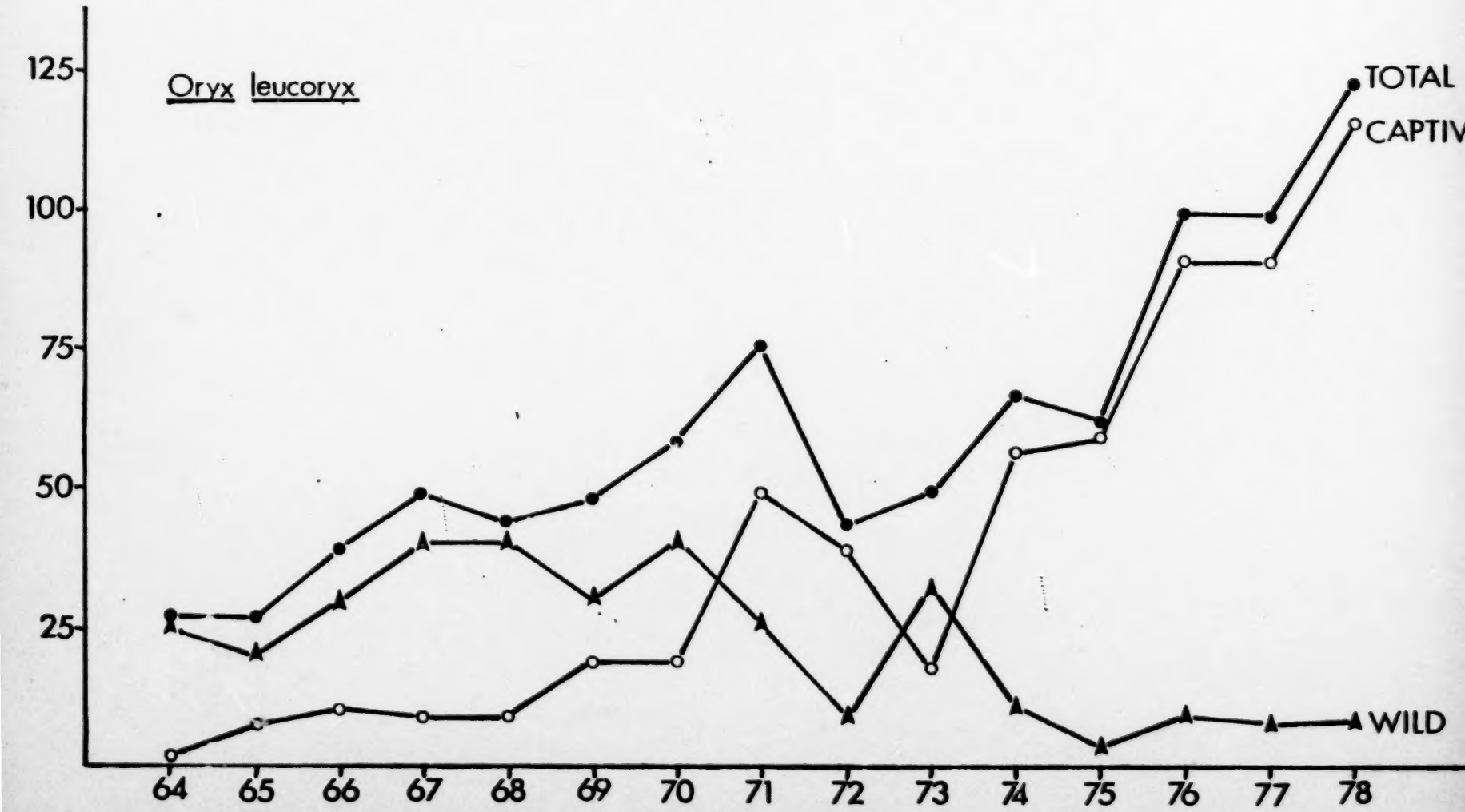
Oryx leucoryx
125
100
75
50
25
TOTAL
CAPTIV
WILD
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78

Fig. 9